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AUTHOR Kendall, William S.
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ABSTRACT

The extent to which three groups of learning disabled (LD) adolescents differed in language was examined. Ss were 30 LD students enrolled in secondary special classes, 30 LD students in secondary special classes, and 30 LD students integrated in regular secondary classes who received additional support beyond that ordinarily provided in regular classes through learning resource/ centers. Analysis of scores on the Test of Adolescent Language revealed significant differences among the language means of the three groups. Ss in special classes scored lower than the other two groups, despite being older and receiving special assistance in language development. (CL)

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Dr. William S. Kendall is Director, Special Education Programs, Prairie View A&M University, Prairie View, Texas. Dr. Kendall presented "Psychoneurological Assessment of Language Disorders in Learning Disabled Adolescents: Research and Prescriptive Suggestions," at the 61st Annual International Convention of the Council for Exceptional Children, Detroit, Michigan.

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William S. Kendall, Ed.D., Director
Special Education Programs
P.O. Box 2363
Prairie View A&M University
Prairie View, Texas 77445

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Psychoneurological Assessment of Language Disorders in Learning Disabled Adolescents: Research and Prescriptive Suggestions

William S. Kendall

Prairie View A&M University

Abstract: The purpose of the present study was to investigate the extent to which three groups of learning disabled adolescents differed in language. The three groups included: (a) 30 LD students enrolled in secondary regular classes, (b) 30 LD students in secondary special classes and (c) 30 LD students integrated in regular secondary classes, and receiving additional support beyond tnat ordinarily provided in regular classes through learning resource centers. The ninety male and female subjects ranged from 143 months to 209 months of age. The Test of adolescent Language was used to measure the subjects' language disorders. The data were analyzed using a one-way analysis of variance. Significant differences were found among the language means of the three groups studied ($p. < 05$).

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Psychoneurological Assessment of Language Disorders in Learning Disabled Adolescents: Research and Prescriptive Suggestions

William S. Kendall
Prairie View A&M University

Appropriate assessment and treatment of language disorders in learning disabled adolescents has been an issue of serious concern of knowledgeable practitioners for the past several years (Kendall & Pattles, 1982; Mann, Goodman & Wiederholt, 1978). Although assessment efforts of learning disabled students are evident (Hardin, 1978; Mercer, Forgnone, & Wolking, 1976), current criticism of psychological and educational assessment approaches dictate the need for effective alternative approaches (Adelman, 1977; Adelman & Taylor, 1979; Cronbach, 1975; Salvia & Ysseldyke, 1978; Sunberg, 1977).

Learning disabled children have been identified as exhibiting a variety of language disorders (Johnson & Myklebust, 1967; McGrady, 1968; Spekman & Roth, 1982; Wiig & Semel, 1976). A number of investigations (e.g., Hessler & Kitchen, 1980; Semel & Wiig, 1975; Vellutino, 1977; Vogel, 1975; Wiig, Semel, & Crouse, 1973), have found relationships between language abilities and learning disabilities. Adequate functioning of the peripheral and central nervous systems as well as psychological integrity is considered essential

for normal language development (Johnson & Myklebust, 1967). Thus, a variety of language disabilities may arise when performance in one or more of the necessary integrities is less than optimal.

It has repeatedly been observed (Salvia & Ysseldyke, 1978; Thurlow & Ysseldyke, 1979; Ysseldyke, 1973; Ysseldyke & Salvia, 1974) that one of the most critical issues in making psychoeducational decisions for and about learning disabled students is that the standardized tests used are often technically inadequate (Smith & Rogers, 1978; Ysseldyke & Algozzine, 1979). Apraxias (expressive disorders) and agnosias (receptive disorders) constitute a substantial portion of language disorders observed in learning disabled children (Myklebust, 1974). Thus, psychoneurological assessment is required in order that specific language disfunctions are identified, and appropriate treatment suggestions offered for learning disabled adolescents.

Recent litigation and legislation at the state and national level require that handicapped students receive a free education commensurate with their unique needs and, where appropriate, be educated with their nonhandicapped peers (Goodman & Price, 1978; Kendall, 1978). Thus, the majority of learning disabled students will receive their education within the regular school environment. As regular educators assume additional responsibility for educating learning disabled students, expertise will be required to resolve considerations concerning assessment of a variety of language disorders of learning disabled adolescents.

Assessment in language is required in order to make specific judgments in regards to the ways in which the student learns most successfully (Boshes & Myklebust, 1964; Zigmond, 1966). In particular, regular class teachers may be asked to modify their lecture techniques to match the learning style of the learning disabled student (Deshler, 1978). It is apparent that the adolescent with a learning disability cannot "make it" in the mainstream of his middle school or high school without special help (Zigmond, 1978).

Resource room settings have become a popular delivery model for learning disabled students (Cohen & Safran, 1981; D'Alonzo, D'Alonzo, & Mauser, 1979; Gickling, Murphy, & Mallory, 1979; McLoughlin & Kass, 1978; Speech & Mandell, 1980; Wiederholt, Hammill, & Brown, 1978). One of the resource teacher's major functions include assessment of language disorders in learning disabled students (Wallace & McLoughlin, 1979). However, the operation of the resource room in serving this purpose has been the subject of considerable debate (Burgett & Dodge, 1976; Cruickshank, 1977; D'Alonzo & Wiseman, 1978; Harris & Mahar, 1975; Herr, Algozzine, & Heuchert, 1976). It is important that resource teachers understand that learning disabled adolescents should have a language program that adequately task-analyzes their linguistic skills (Lloyd, 1975; Ysseldyke, 1978).

The development of appropriate programs in written language for learning disabled adolescents has received a significant

amount of attention (Brown, Hammill, & Wiederholt, 1978; Hammill & Larsen, 1978; Johnson, Blalock, & Nesbitt, 1978; Wiederholt, 1978). Wiederholt (1978) notes that proficiency in written language is the goal of much of the educational programming for learning disabled adolescents, and forms the core of most instructional efforts. Larsen (1978) reports that a failure to clearly differentiate between the large number of adolescents who are underachieving due to a lack of motivation, poor teaching etc., and those who have specific learning disabilities detracts from the provision of services to pupils whc exhibit severe problems in language. Thus, an issue of primary importance for learning disability practitioners is appropriate assessment of language disorders in learning disabled adolescents. The purpose of this study was to investigate the extent to which three groups of learning disabled adolescents differed in language. The null hypothesis of no difference was formulated.

Method

Subjects

Ninety subjects were chosen from several secondary schools in the inner city of a large metropolitan school district. The test subjects were randomly selected so that a cross section of male-female and black-white were represented. The majority of the total population is made up of members of lower socioeconomic backgrounds. The Wechsler intelligence Scale for Children-Revised (WISC-R) was used to determine the intellectual classification

range for participants in this sample.

The three groups included: (a) 30 LD students enrolled in secondary regular classes, (b) 30 LD students in secondary special classes, and (c) 30 LD students integrated in regular secondary classes and receiving additional support beyond that ordinarily provided in regular classes through learning resource centers. Only subjects who were assigned to the identified setting for a period of at lease two years were included in the study. Additional subject characteristics are presented in Table 1.

Procedure

The Test of Adolescent Language (TOAL) (Hammill, Brown, Larsen, & Wiederholt, 1980) was used to measure the subjects' language disorders. The results of the TOAL are intended to serve as a measurement device in investigations where researchers are studying the language behavior of adolescents. This instrument may be used to screen adolescents who are suspected of having language problems and to quickly identify those who are performing at a level that is significantly below their peers. The TOAL was administered and scored according to the procedures outlined in the examiners manual. Each of the subtests was administered in a room free from auditory, visual, or other distraction.

Results

The data were analyzed using a one-way analysis of variance. Significant differences were found among the means of the language scores of the three groups ($F=7.15$, 2/87, $p < .05$). Table 2

TABLE 1

Means and Standard Deviations (SD's) for

Chronological Age (CA)[a] and IQ[b] for the Three Groups

Group	CA[a]		IQ[b]	
	Mean	SD	Mean	SD
Regular	166	15.09	90.50	11.21
Special	190.7	16.74	85.87	8.92
Resource Center	170.53	19.24	91.20	8.55

Note. [a]In Months.

[b]Wechsler Intelligence Scale for Children-Revised.

TABLE 2

Analysis of Variance of Language Behavior Variables for the Three Groups

Source	SS	df	Ms	F
Total	10402.51	89		
Between	1468.82	2	734.41	7.15*
Within	8933.67	87	102.69	

*$p < .05$

presents these results. Therefore, the hypothesis of no difference was rejected. Additional analyses of these findings were performed for all pairwise combinations of the means: (a) secondary regular LD group vs. secondary special LD group; (b) secondary special LD group vs. secondary learning resource group; and (c) secondary regular LD group vs. learning resource group. The means and standard deviations (SDs) for language behavior of the three groups were regular class group 65.10, 15,47, special class group 56.03, 6.53; and resource group 64, 11.38, respectively.

A comparison of language behavior of the regular vs. special group, and special vs. resource group indicated a significant difference ($t=3.98$, $p<.05$, and $t= 7.97$, $p<.05$, respectively). The regular vs. resource group means were not significantly different ($t=.26$, $p.<.05$).

Discussion

The hypothesis of no difference in language of the three groups studied was rejected. Investigation has shown that learning disabled adolescents in special classes scored lower in language than the other two groups studied, in spite of being older, and receiving special assistance in language development. This finding is supportive of reports of (Kendall & Battles, 1982), that learning disabled adolescents are more productive in language development in regular class settings.

The larger standard deviation scores in chronological age demonstrated by the learning resource group suggests that there

was more dispersion among the scores of this group. This finding is suggestive of the variety of candidates being served by the learning resource center. The learning resource center group scored lower than the regular class group in language behavior. This was so even with treatment for their language disabilities in learning resource centers. This finding is consistent with previously reported research (e.g., Burgett & Dodge; Cruickshank, 1977; Harris & Mahar, 1975; Kendall, 1981), that the operation of the resource room is plagued with problems.

Learning disabilities are the result of perceptual processing deficits. Perception is specifically concerned with the neurological system's ability to receive stimuli, or organize such stimuli into neurological energy, and to impel this energy to appropriate portions of the central nervous system, so that appropriate language experiences can be realized. Psychoneurological assessment is required in order to determine whether the language deficit is receptive or expressive, and whether there are deficiencies of integration. Learning disability practitioners should realize that language intervention strategies for learning disabled adolescents are similar to those for younger students, however, the content is adjusted to the interests and performance levels of the adolescent (Johnson & Myklebust, 1967; Johnson, 1967). Strategies and procedures are selected and designed which utilize the student's strengths, but also pay particular attention to deficit areas.

The fact that mastery of language requires the student to organize, decode, encode, and integrate information, it is essential that the central nervous system be intact or psychoneurological learning disabilities are likely to occur. Such disorders may affect verbal and non verbal language. It seems important therefore, that educators utilize psychoneurological assessment as a basis for making decisions concerning the most efficacious treatment approaches for language disorders in learning disabled adolescents.

In summary, regardless of whether learning disabled adolescents are served in regular classes, special classes, or learning resource centers, it is essential that their language behavior be assessed by means of psychoneurological assessment, and treatment provided accordingly.

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